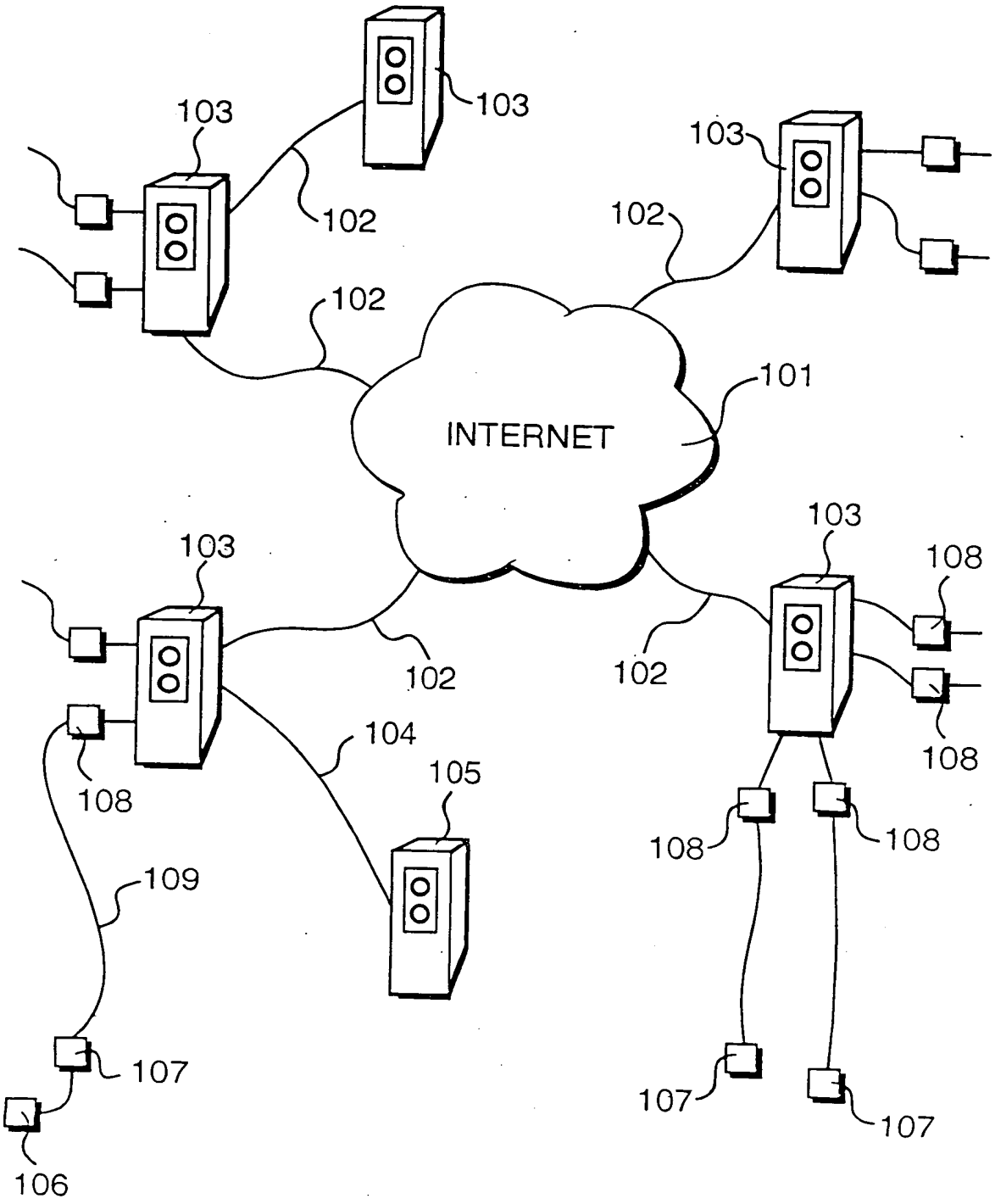

103
103
102
102
103
102
102
101
INTERNET
103
103
108
102
102
104
105
108
108
108
108
109
107
107
107
106

Figure 1

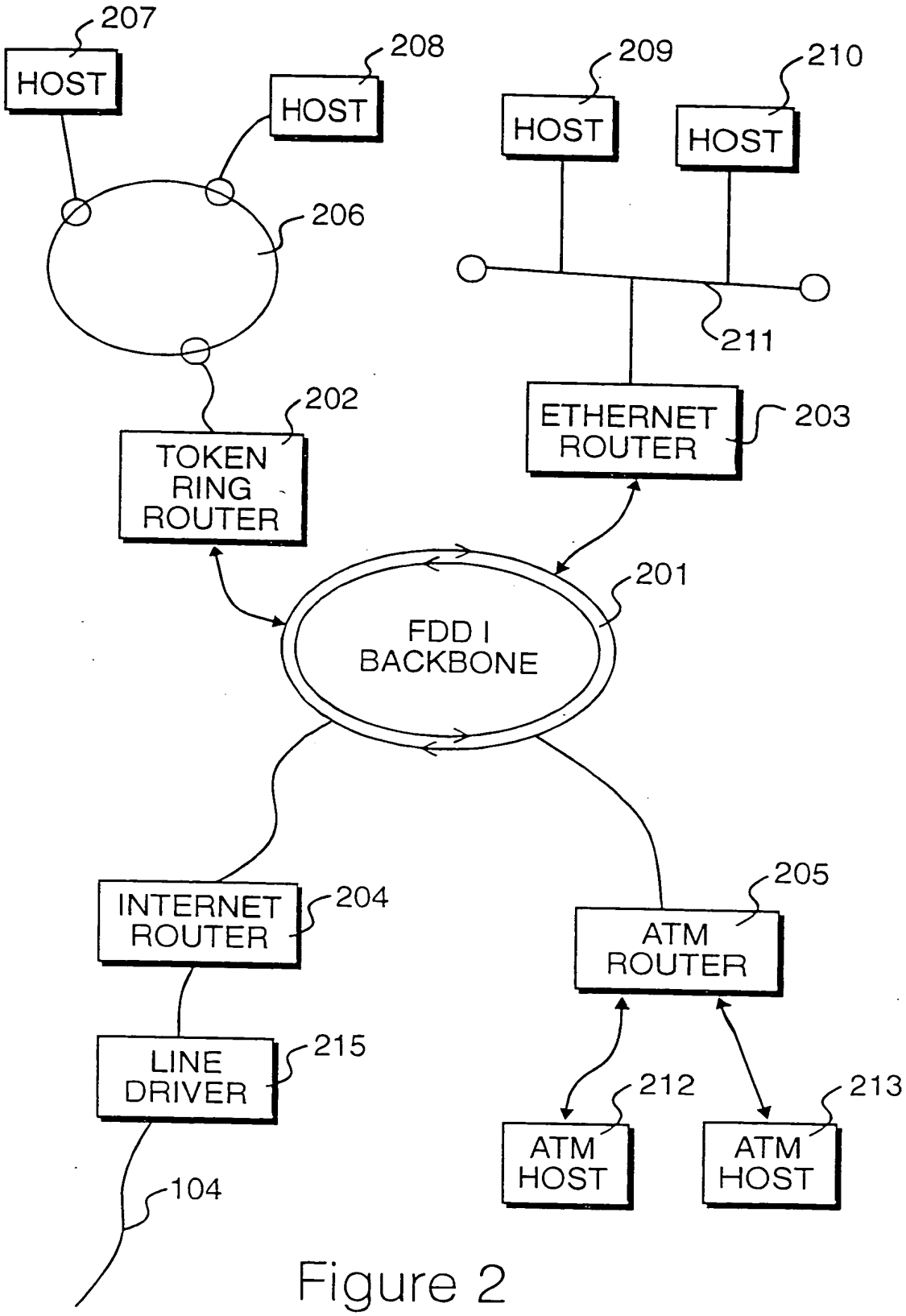

207
HOST
208
HOST
206
209
HOST
210
HOST
211
202
TOKEN RING ROUTER
ETHERNET ROUTER
203
201
FDD I BACKBONE
INTERNET ROUTER
204
205
ATM ROUTER
LINE DRIVER
215
212
ATM HOST
213
ATM HOST
104

Figure 2

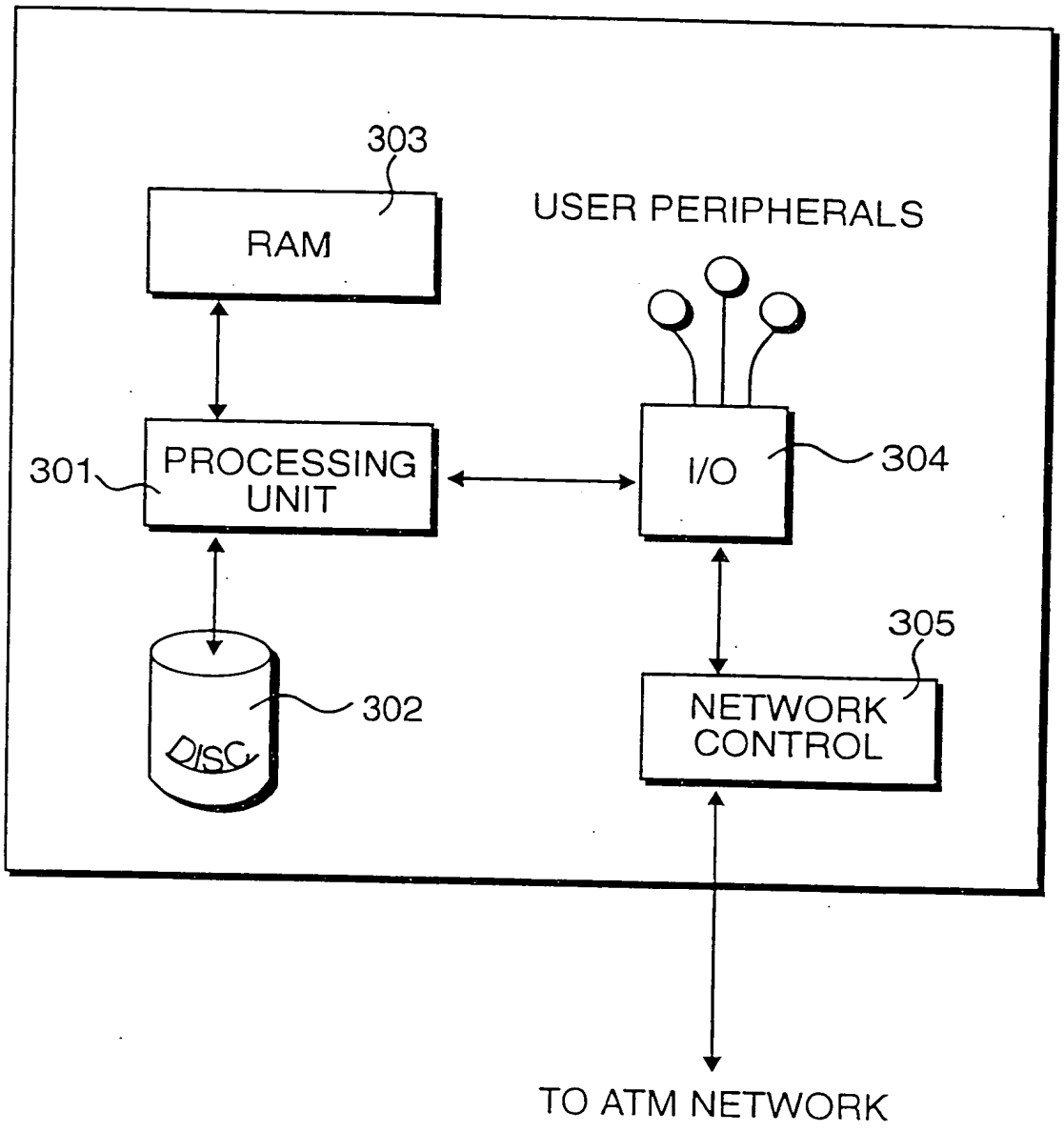

303
RAM
USER PERIPHERALS
301
PROCESSING UNIT
I/O
304
305
NETWORK CONTROL
302
DISC
TO ATM NETWORK

Figure 3

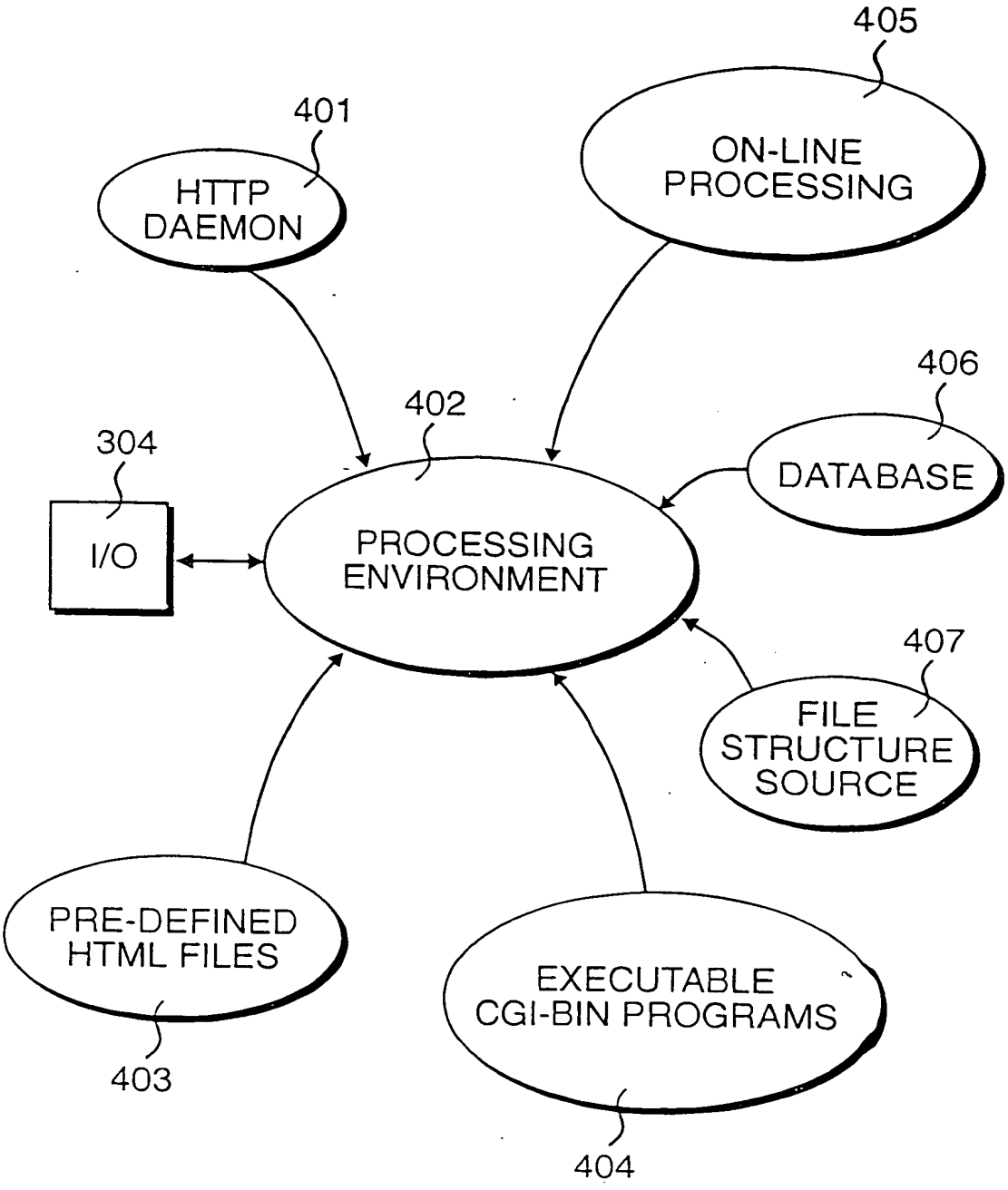

405
401
HTTP DAEMON
ON-LINE PROCESSING
406
402
304
DATABASE
I/O
PROCESSING ENVIRONMENT
407
FILE STRUCTURE SOURCE
PRE-DEFINED HTML FILES
EXECUTABLE CGI-BIN PROGRAMS
403
404

Figure 4

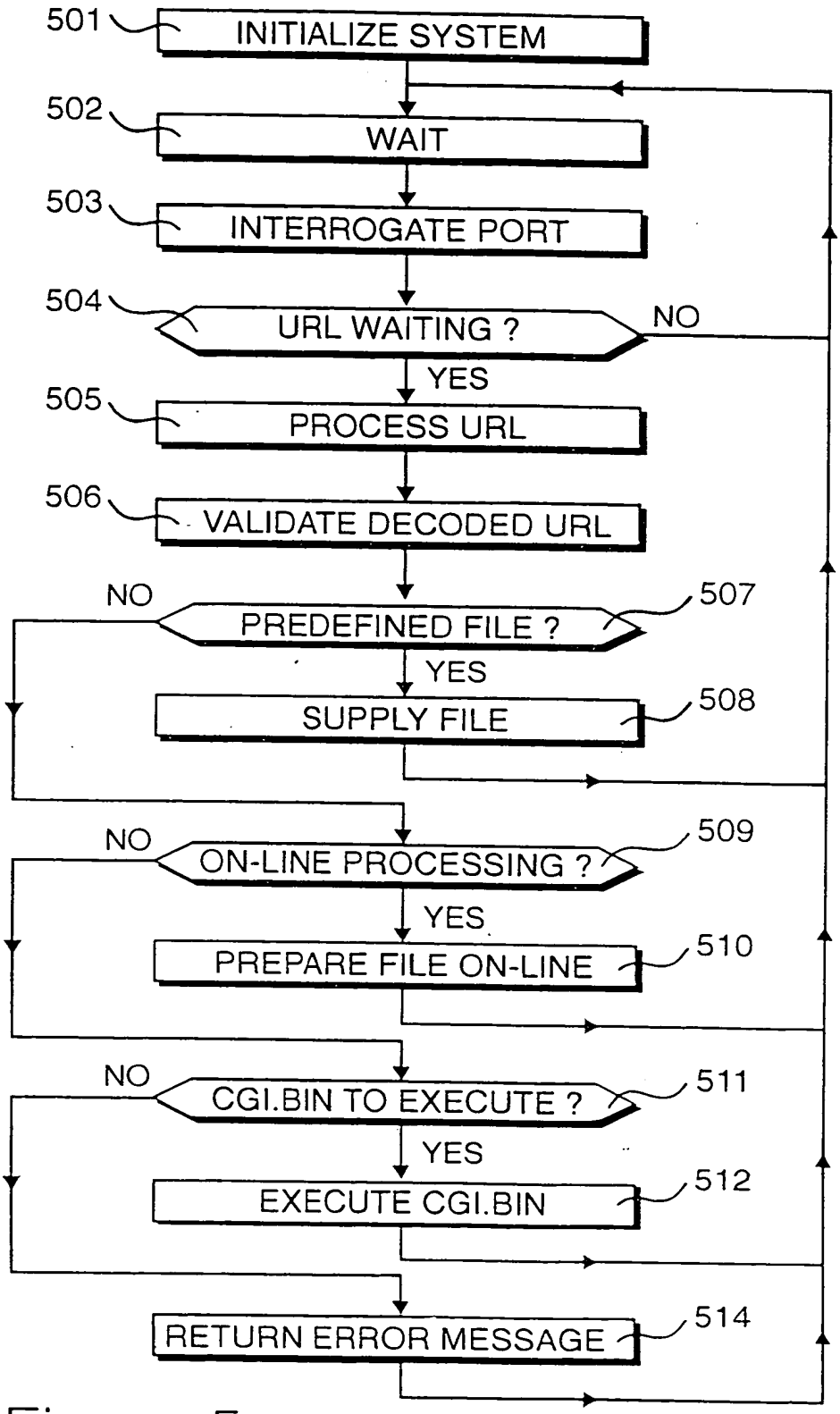

501
INITIALIZE SYSTEM
502
WAIT
503
INTERROGATE PORT
504
URL WAITING ?
NO
YES
505
PROCESS URL
506
VALIDATE DECODED URL
NO
PREDEFINED FILE ?
507
YES
SUPPLY FILE
508
NO
ON-LINE PROCESSING ?
509
YES
PREPARE FILE ON-LINE
510
NO
CGI.BIN TO EXECUTE ?
511
YES
EXECUTE CGI.BIN
512
RETURN ERROR MESSAGE
514

Figure 5

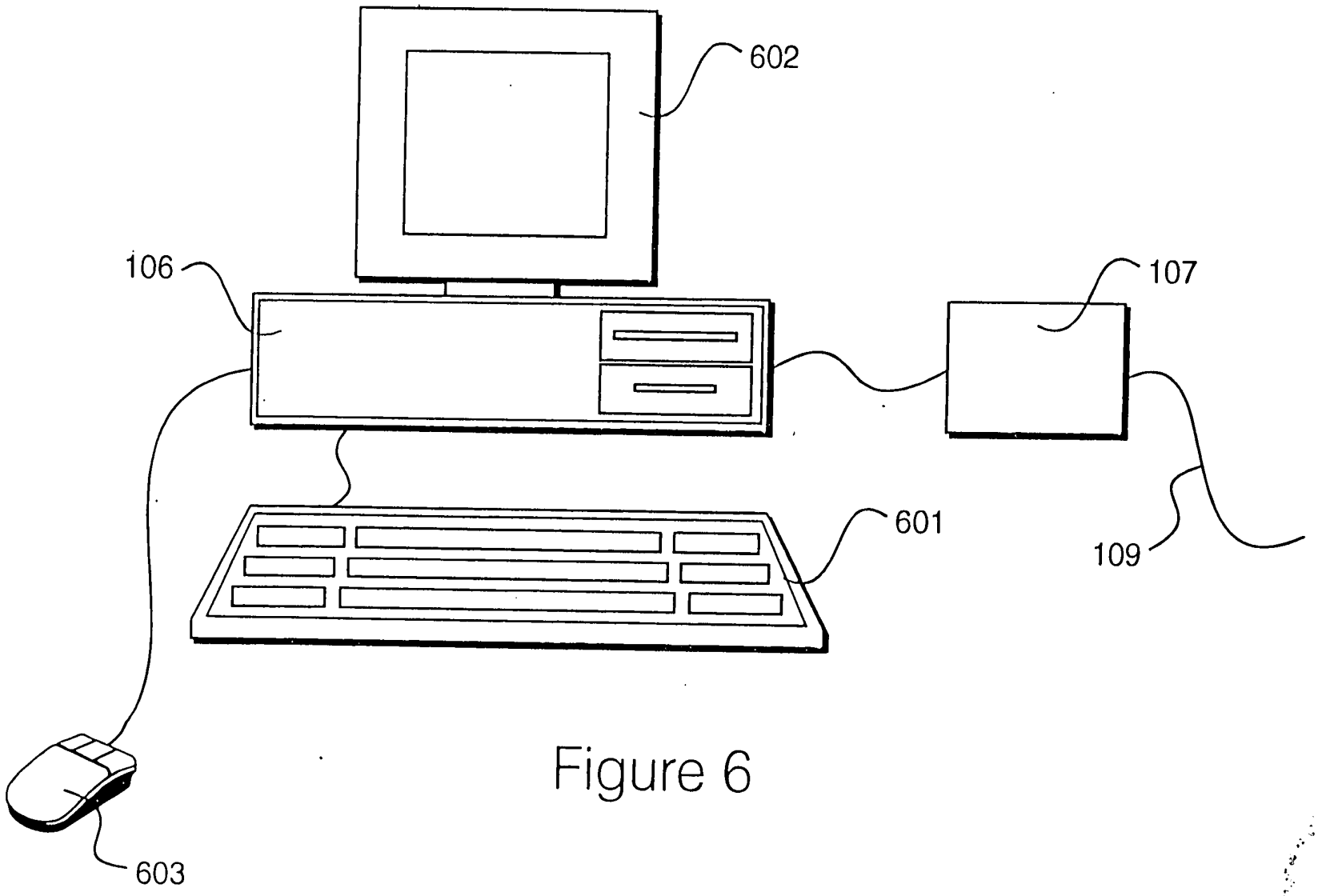


Figure 6

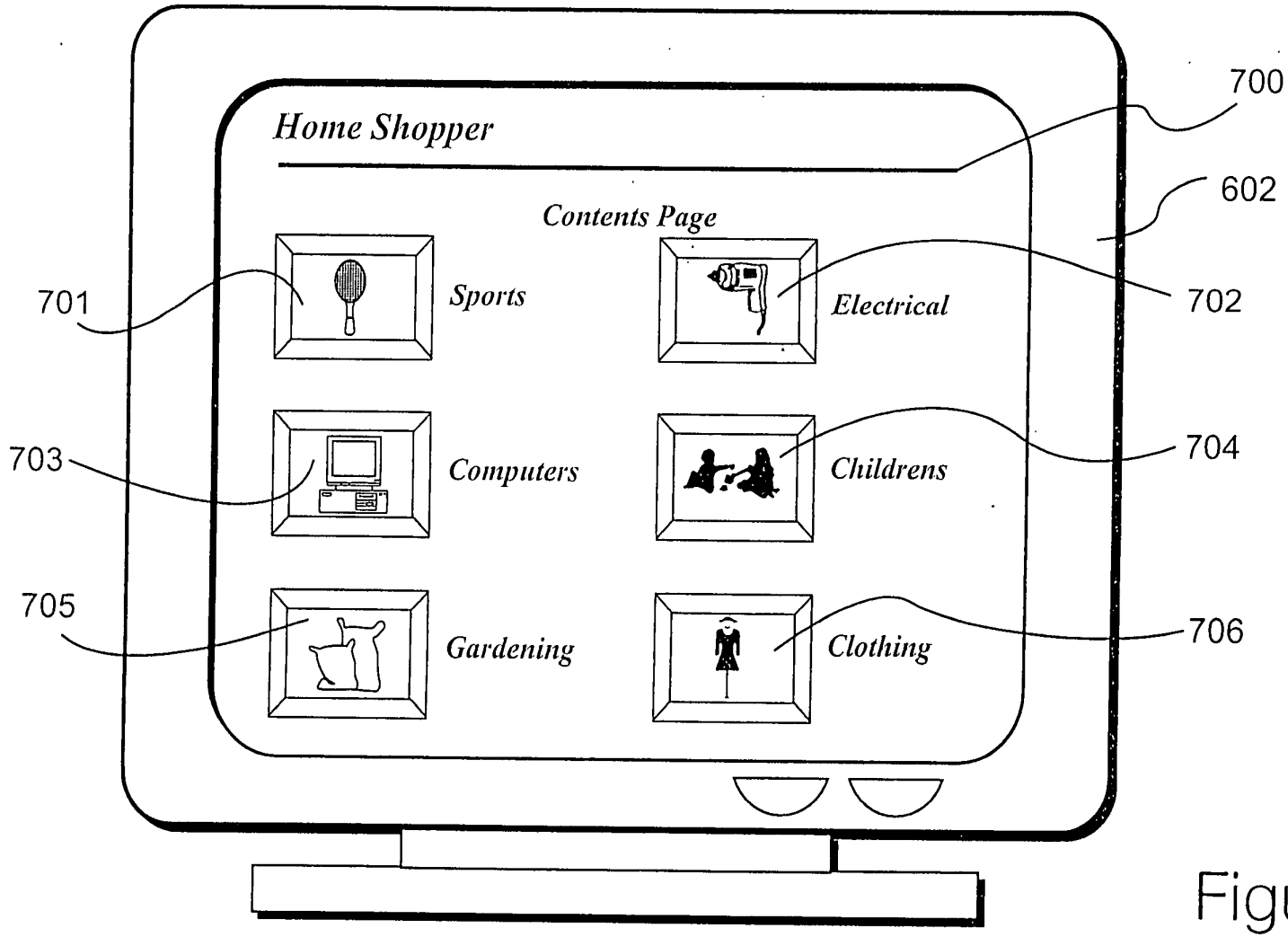

Home Shopper
Contents Page
Sports
Electrical
Computers
Childrens
Gardening
Clothing
700
602
701
702
703
704
705
706

Figure 7

ASCII transmission to a browser

```
1  <HEAD><TITLE>Home Shopper</TITLE></HEAD>
2  <BODY>
3  <hr size=1>
4  <H1>Contents Page></H1>
5  <A HREF="http://localhost:8081/vdl/123456/1000/123/999">
6  <img src="/im/sport.gif" align=middle hspace=5>Sports</A>
7  <A HREF="http://localhost:8081/vdl/123456/1001/123/999">
8  <img src="/im/elec.gif" align=middle hspace=5>Electrical</A>
9  <p>
10 <A HREF="http://localhost:8081/vdl/123456/1002/123/999">
11 <img src="/im/elec.gif" align=middle hspace=5>Computers</A>
12 <A HREF="http:/localhost:8081/vdl/123456/1003/123/999">
13 <img src="/im/child.gif" align=middle hspace=5>Childrens</A>
14 <p>
15 <A HREF="http://localhost:8081/vdl/123456/1004/123/999">
16 <img src="/im/gard.gif" align=middle hspace=5>Gardening</A>
17 <A HREF="http://localhost:8081/vdl/123456/1005/123/999">
18 <img src="/im/clth.gif" align=middle hspace=5>Clothing</A>
19 <hr size=1>
20 <p>
21 </BODY>
```

Figure 8

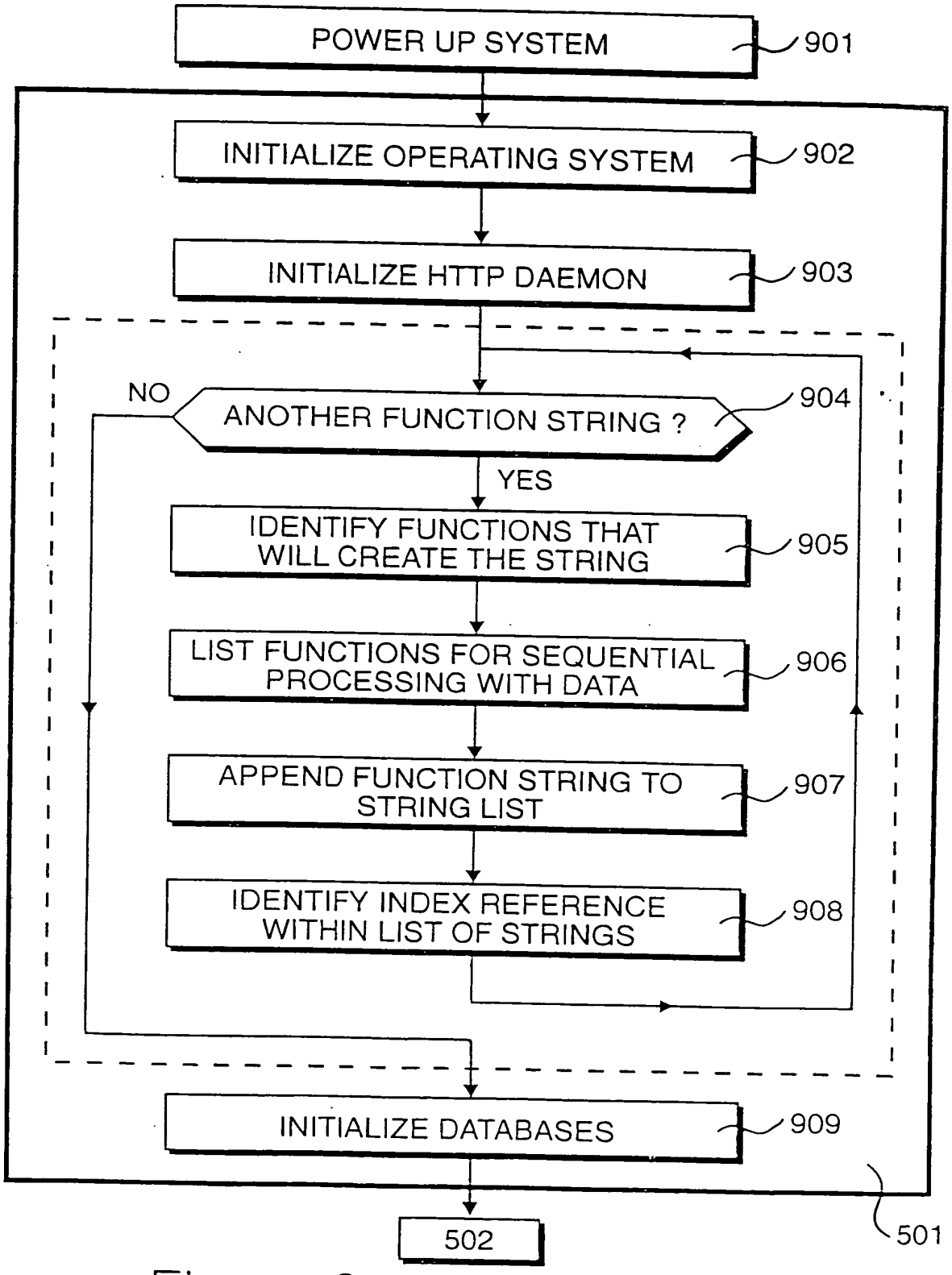

POWER UP SYSTEM
901
INITIALIZE OPERATING SYSTEM
902
INITIALIZE HTTP DAEMON
903
NO
ANOTHER FUNCTION STRING ?
904
YES
IDENTIFY FUNCTIONS THAT WILL CREATE THE STRING
905
LIST FUNCTIONS FOR SEQUENTIAL PROCESSING WITH DATA
906
APPEND FUNCTION STRING TO STRING LIST
907
IDENTIFY INDEX REFERENCE WITHIN LIST OF STRINGS
908
INITIALIZE DATABASES
909
502
501

Figure 9

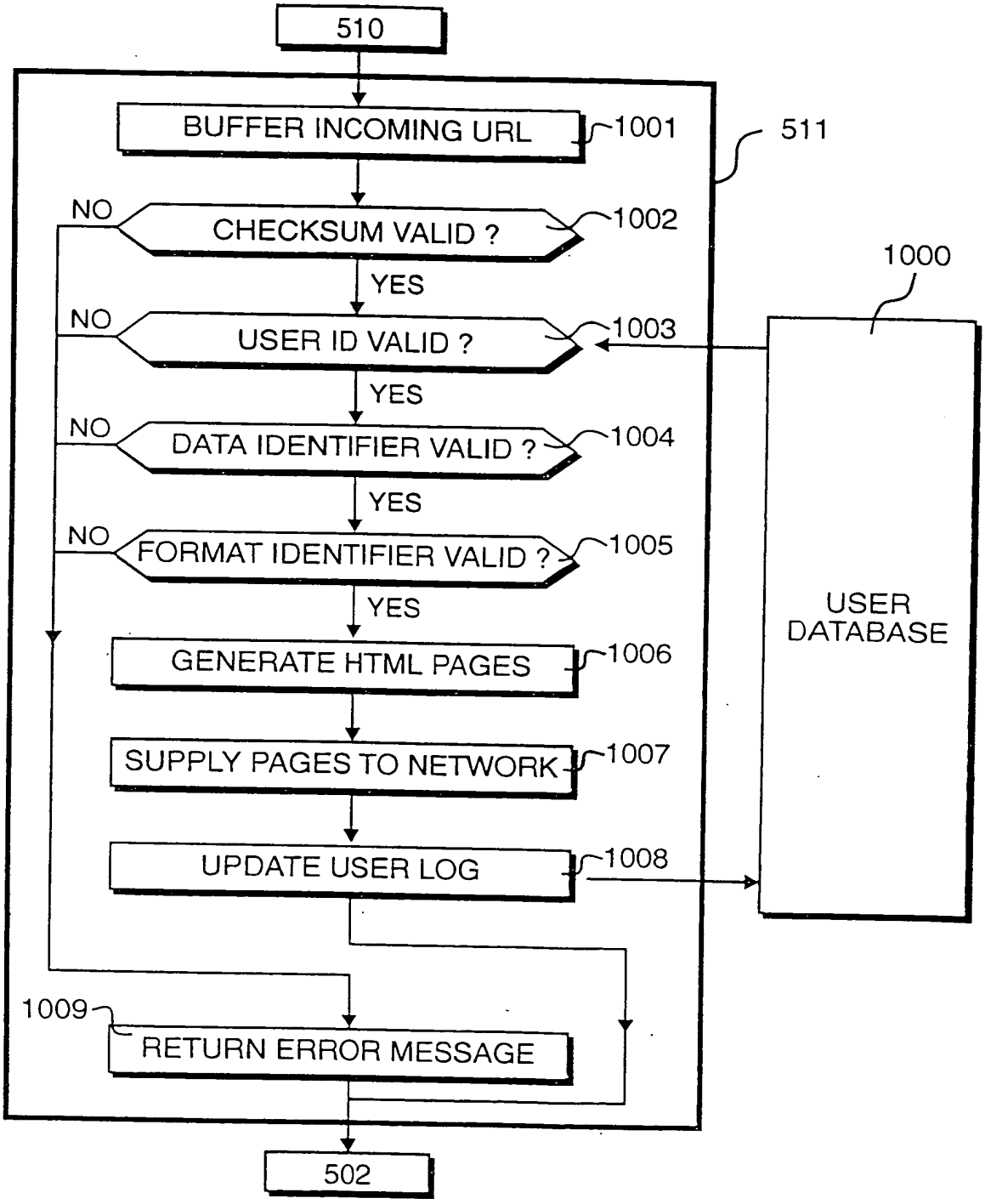

510
BUFFER INCOMING URL
1001
511
NO
CHECKSUM VALID ?
1002
1000
YES
NO
USER ID VALID ?
1003
YES
NO
DATA IDENTIFIER VALID ?
1004
YES
NO
FORMAT IDENTIFIER VALID ?
1005
YES
USER DATABASE
GENERATE HTML PAGES
1006
SUPPLY PAGES TO NETWORK
1007
UPDATE USER LOG
1008
1009
RETURN ERROR MESSAGE
502

Figure 10

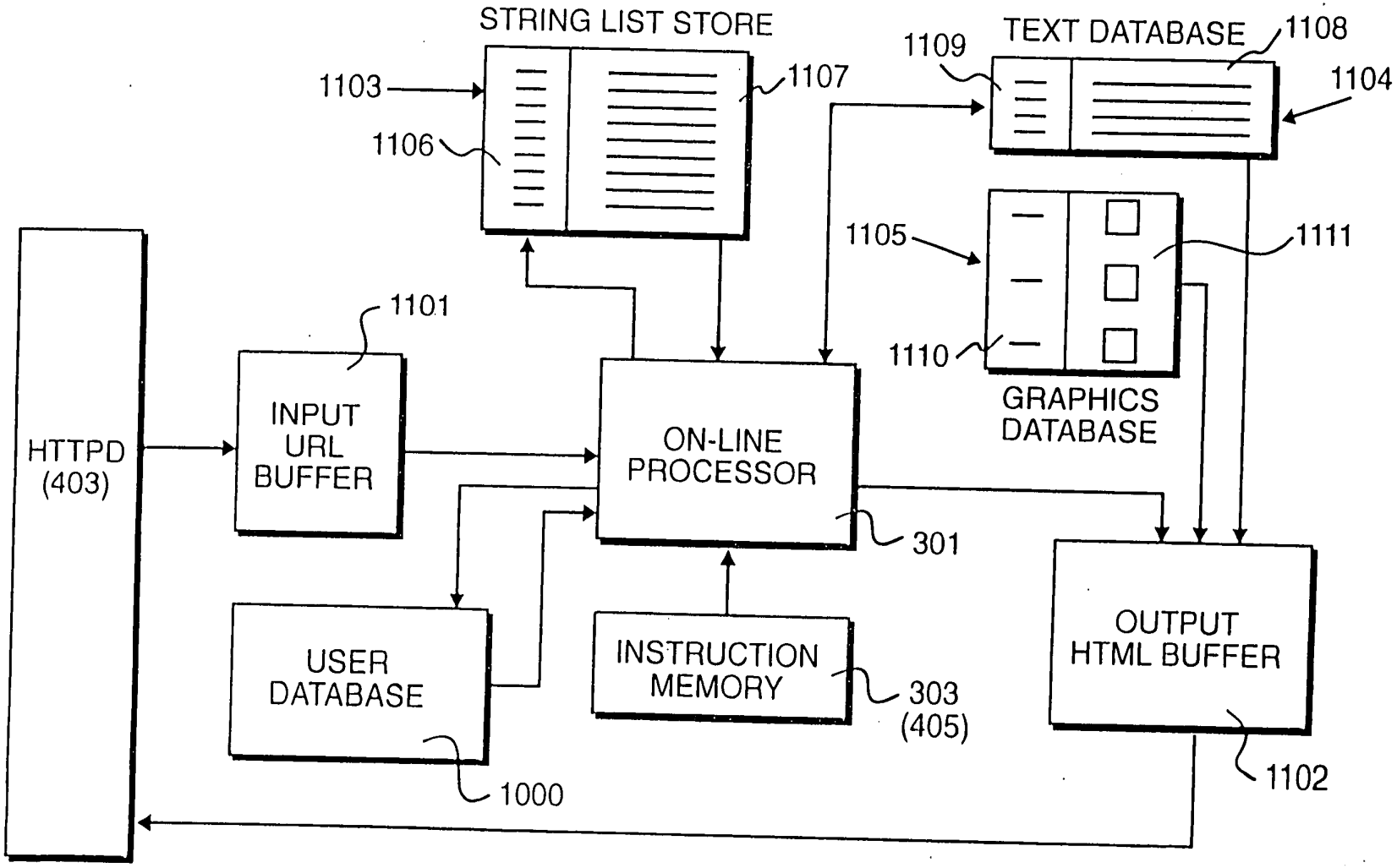

STRING LIST STORE
1103
1106
1107
TEXT DATABASE
1109
1108
1104
1105
1111
1110
GRAPHICS DATABASE
1101
HTTPD (403)
INPUT URL BUFFER
ON-LINE PROCESSOR
301
USER DATABASE
INSTRUCTION MEMORY
303 (405)
OUTPUT HTML BUFFER
1000
1102

Figure 11

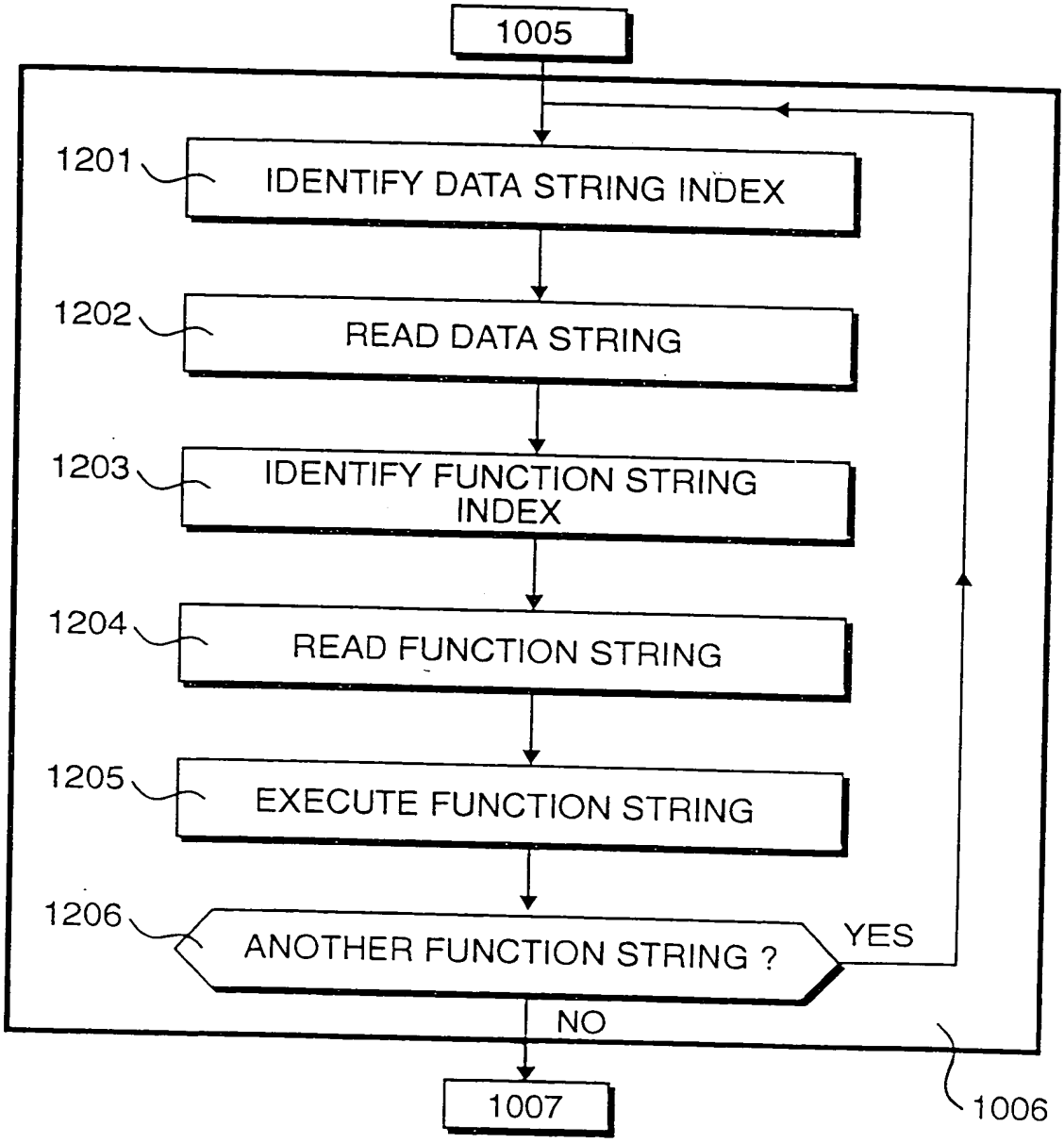

1005
1201
IDENTIFY DATA STRING INDEX
1202
READ DATA STRING
1203
IDENTIFY FUNCTION STRING INDEX
1204
READ FUNCTION STRING
1205
EXECUTE FUNCTION STRING
1206
ANOTHER FUNCTION STRING ?
YES
NO
1007
1006

Figure 12

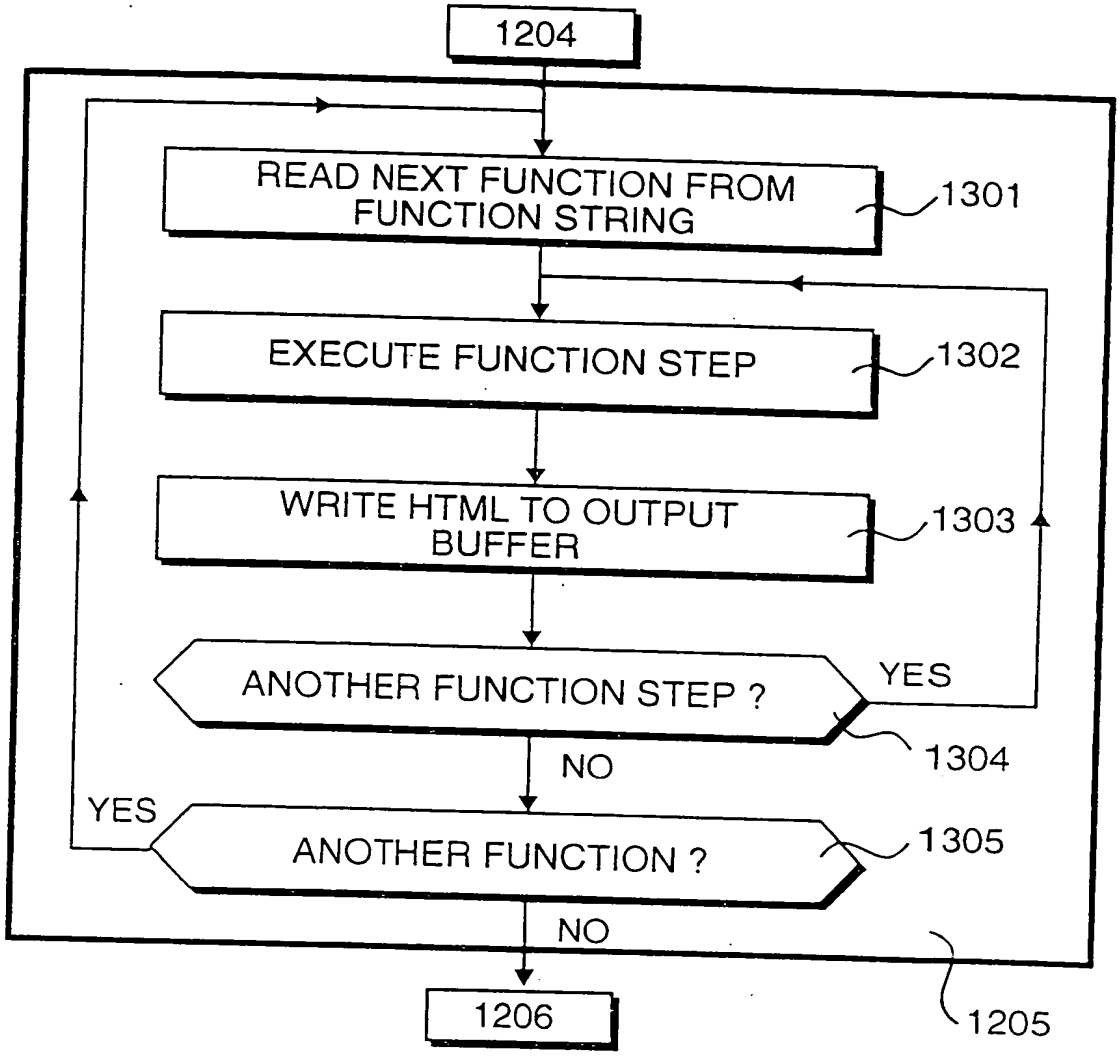

1204
READ NEXT FUNCTION FROM FUNCTION STRING
1301
EXECUTE FUNCTION STEP
1302
WRITE HTML TO OUTPUT BUFFER
1303
ANOTHER FUNCTION STEP ?
YES
1304
NO
YES
ANOTHER FUNCTION ?
1305
NO
1206
1205

Figure 13

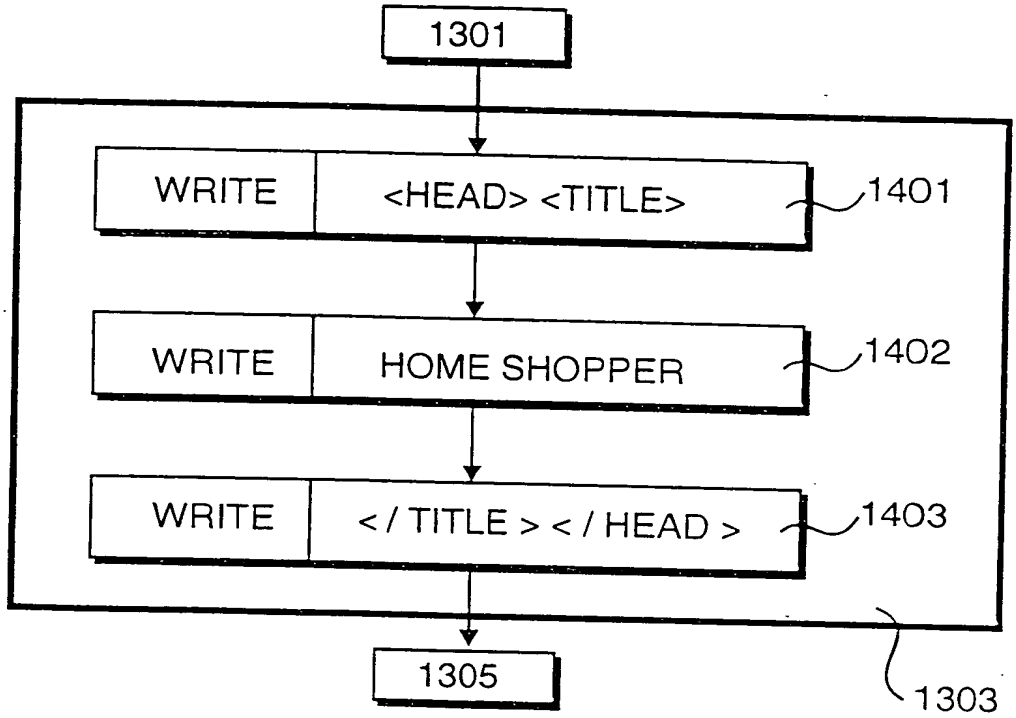

1301
WRITE
<HEAD> <TITLE>
1401
WRITE
HOME SHOPPER
1402
WRITE
< / TITLE > < / HEAD >
1403
1305
1303

Figure 14